MAY/FY06

US ARMY ENGINEER RESEARCH & DEVELOPMENT CENTER

COLD REGIONS RESEARCH AND ENGINEERING LABORATORY

New Hampshire

Army Defense Environmental Restoration Program Installation Action Plan

Final 25 July 2006

Table of Contents

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations, necessary remedial actions, and long term management.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Cold Regions Research and Engineering Laboratory and regulatory agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan during a planning workshop held on 16 May 2006:

Company/Installation/Branch
Engineering & Environment, Inc. for USAEC
New Hampshire Department of Environmental Services (NHDES)
USAEC
Cold Regions Research & Engineering Laboratory

Acronyms & Abbreviations

AEDB-R	Army Environmental Database – Restoration
AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response Compensation and Liability Act (1980)
CRREL	Cold Regions Research and Engineering Laboratory
CTC	Cost-to-Complete
cy	cubic yards
DA	Department of Army
DERP	Defense Environmental Restoration Program (now called ER,A)
DD	Decision Document
DSERTS	Defense Site Environmental Restoration Tracking System
E&E	Ecology and Environment, Inc.
EPA	(United States) Environmental Protection Agency
EPIC	Environmental Photographic Interpretation Institute
ER,A	Environmental Restoration, Army (formally called DERA)
FERF	Frost Effects Research Facility
FS	Feasibility Study
ft	foot
ft^2	square feet
FY	Fiscal Year
gal	gallon
gpd	gallons per day
GW	Groundwater
HRS	Hazard Ranking System
IAP	Installation Action Plan
IMA	Installation Management Agency
IRA	Interim Remedial Action
IRP	Installation Restoration Program
K	$1,000
kg	kilograms
LTM	Long-term Management
MCL	Maximum Contaminant Level
mg	milligrams
MMRP	Military Munitions Response Program
MW	Monitoring Well
NERI	Northeast Research Institute
NFA	No Further Action
NH	New Hampshire
NHDES	New Hampshire Department of Environmental Services
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
PAH	Poly Aromatic Hydrocarbons
PA	Preliminary Assessment

Acronyms & Abbreviations

POL	Petroleum, Oil & Lubricants
POM	Program Objective Memorandum (budget)
PY	prior year
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RFA	RCRA Facility Assessment
RI	Remedial Investigation
RIP	Remedy in Place
RRSE	Relative Risk Site Evaluation
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethylene
TPHC	Total Petroleum Hydrocarbon Contaminants
TRC	Technical Review Committee
ug/l	microgram per liter
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency (now called CHPPM)
USATHMA	United States Army Toxic and Hazardous Material Agency (now called USAEC)
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
yr	year

Installation Information

Installation Locale:
Cold Regions Research and Engineering Laboratory (CRREL) is located on 31 acres of land in Hanover, Grafton County, New Hampshire. Eleven acres are owned by the US Army and the remaining twenty acres are leased from Dartmouth College (note: Dartmouth College holds Right of First Refusal to all properties within the town of Hanover, including the eleven acres of Army owned land). Highway 10 forms the eastern boundary of the site and the Connecticut River is located immediately west of the CRREL property. CRREL is 1.5 miles north of the town of Hanover (population 10,500). Norwich, Vermont (population 3,100) is located 1.75 miles southwest of CRREL on the western side of the Connecticut River.

Installation Mission: Engineering and scientific research of cold regions for the US Army Corps of Engineers (USACE), Department of Defense and the nation.

Lead Organization:
Installation Management Agency, Northeast Region

Lead Executing Agency:
USACE/ERDC-CRREL

Regulatory Participation:
Federal: US Environmental Protection Agency, Region I
State: New Hampshire Department of Environmental Services

National Priorities List (NPL) Status: Not on NPL

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status: No RAB/TRC/TAPP currently exist at CRREL. The public was last surveyed for interest in 1995.

Installation Program Summaries

IRP

Primary Contaminants of Concern: Trichloroethylene, Petroleum/Oil/Lubricants
Affected Media of Concern: Groundwater, Soil
Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 2002
Funding to date (up to FY05): $ 11,741,960
Current year funding (FY06): $480,000
Cost-to-Complete (FY07+): $7,070,000

Installation Historic Activity

Cold Regions Research and Engineering Laboratory (CRREL) is an active sub-installation of the Engineer Research and Development Center of the US Army Corps of Engineer. CRREL is the Army's center of expertise in cold regions science and engineering. CRREL performs basic and applied research in snow, ice, and frozen ground. CRREL also provides the US Army with practical engineering research to develop equipment and procedures for application in cold regions.

The site is roughly rectangular in shape and measures approximately 1,360 feet east to west, and 970 feet north to south at its maximum extent. Student housing for Dartmouth College is located adjacent to the site along the north and south property boundaries. Land use within 1/4 mile is primarily rural and residential, with zones of light industry, commercial/service, cropland/pasture, and deciduous and mixed forest.

In 1960, CRREL leased 19.2 acres of land from Dartmouth College for the purpose of constructing a research facility. Prior to CRREL construction, the land was used primarily for agricultural purposes. Gravel was also mined on the western edge of the site. CRREL was officially established on 1 February 1961, combining the work of two predecessor organizations then located in other states: the Snow, Ice, and Permafrost Research Establishment, which was formed on 27 August 1947; and the Arctic Construction and Frost Effects Laboratory, established on 25 February 1953. CRREL has been active since its inception.

CRREL laid the cornerstone for its first building on 15 June 1960, and the Main Laboratory Building became fully operational in late 1963. Since then, CRREL has grown significantly with the addition of several new buildings. These include the Facilities Engineering building (1968), the Logistics and Supply building (1976), the Main Laboratory addition (1977), the Ice Engineering building (1978), the Frost Effects Research Facility (FERF,1985), the Cradle and Crayon Child Development Center (1990), the Remote Sensing Facility (1993), the Technical Information Analysis Center (1993), and the permanent groundwater treatment facility (1994). In 1982, 11.02 acres of additional land was purchased to accommodate the FERF. This land is located along the western border of the original CRREL tract. This purchase expanded CRREL to its current size of 30.22 acres.

The Army is investigating all potential areas of concern for any detrimental environmental impact, by implementing its environmental response authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA).

The installation was placed on the Federal Agency Hazardous Waste Compliance Docket in January 1992 due to the release of trichloroethylene (TCE) into the Connecticut River. A Technical Review Committee Charter was signed in December 1991 by the U.S. Environmental Protection Agency (EPA) Region I, New Hampshire Department of Environmental Services, Vermont Department of Environmental Conservation, town of Hanover, New Hampshire, village of Norwich, Vermont, Dartmouth College, and the U.S. Army. The TRC has been inactive since 1995 following the last survey of public interest.

Cleanup Program Summary

IRP

- Prior Year Progress: Remaining three active sites are in the RA(O) phase. Remedial activities have been conducted at two of the sites as research projects to develop alternative remedial technologies suitable for use at Cold Regions. The third site currently has an ex-situ treatment system in operation, and no changes other than system maintenance and optimization are anticipated.
- Future Plan of Action: Decision Documents are currently scheduled in FY08 describing the final remedies at these three sites

COLD REGIONS RESEARCH AND ENGINEERING LABORATORY

Installation Restoration Program

IRP Summary

Total AEDB-R IRP Sites / AEDB-R sites with Response Complete: 18/15

AEDB-R SITE TYPES:

3 Spill Site Area	2 ASTs	6 USTs
3 Storage Area	1 Other	2 Contaminated Ground Water
1 Waste Lines		

Most Widespread Contaminants of Concern: : Trichloroethylene, POL

Media of Concern: Soil, Groundwater

Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):

1993 - CECRL-018 - IRA, Groundwater Treatment Connection - $265.0K
1991-94 – CECRL-18 - RA, Groundwater Treatment Plant - $2,657.6K
1989 – UST removals (All six tanks) - (non-DERA funds).
1998-2001- CECRL-009 - REM, Treatment of Research Ice Well - $50.0K

Total IRP Funding

Prior years (up to FY05):	$11,741,960
Current year funding (FY06):	$ 480,000
Future Requirements (FY07+): ...	$ 7,070,000
Total:	$19,291,960

Duration of IRP

Year of IRP Inception: 1990
Year of IRP RIP/RC: 2024
Year of IRP Completion including Long-Term Management (LTM): 2024

IRP Contamination Assessment

IRP Contamination Assessment Overview

Since 1960, a total of 9 underground storage tanks (USTs) have been installed at CRREL. The USTs have been used to store a variety of fuels and chemicals including No. 5 fuel oil, No. 2 fuel oil, gasoline, and TCE. To date, all original USTs have been removed and two new USTs remain and are used for No.2 fuel oil storage.

TCE was the refrigerant used in the cooling system in CRREL's main laboratory from 1960 to 1987. TCE was also used as a degreaser. A Preliminary Assessment/Site Investigation (PA/SI), performed by CRREL and completed in 1991, indicated the presence of TCE in three of the four production wells tested. The production wells, which produce approximately 850,000 gallons of water per day, are the source of cooling system water at the installation. TCE was also detected in soil samples collected at several areas of concern, in two residential wells on the Vermont side of the Connecticut River, at the CRREL storm water discharge into the Connecticut River, and infrequently 100 feet downstream of the CRREL storm water discharge. At this time, CRREL initiated Operation Sweetwater to use CRREL's in-house capabilities to analyze the water supplies of any concerned residents in the site area. TCE was not detected in any other nearby drinking water supply wells. CRREL also provided bottled water to the two owners of the TCE-containing wells until the residents were connected to the municipal water supply system. An additional residential well in Vermont, during October and December 1992 sampling events, has shown TCE contamination after the first two houses were connected to the municipal water supply system. This residence was subsequently connected to the municipal water supply system in the spring of 1993.

In 1991, the US Army Environmental Center (formerly the US Army Toxic and Hazardous Materials Agency) initiated a Phase I Remedial Investigation (RI) to define the sources of contamination. The Phase I RI Report was provided to the TRC members for review/comment and approved with minor revisions in 4th Qtr, FY92. The Phase I RI examined eighteen areas of concern. These areas are identified as CECRL-001 through CECRL-018 in the Defense Site Environmental Restoration Tracking System (AEDB-R) and are discussed individually below. Based on the results of the Phase I RI, a Phase II RI was initiated in 1st Qtr, FY93. The Phase II RI Report was provided to the TRC members for review/comment and approved with minor revisions in 3rd Qtr, FY94. The Phase I and Phase II RIs identified three sites as being the primary sources of TCE contaminated ground water; CECRL-002, CECRL-009 and CECRL-013. Due to the proximity of these areas, and their alignment with respect to the ground water flow patterns, these areas appear to create a single contamination plume beneath CRREL. Releases of petroleum-related contaminants have also occurred at several of the AEDB-R sites. However, it appears this contamination was limited primarily to soils and a perched water table near CECRL-015 and has been addressed and is no longer of concern.

IRP Cleanup Exit Strategy

CECRL-002 and 009: Anticipating an in-situ groundwater treatment will be conducted as the final remedial to clean these areas up to the established standards.

CECRL-018: Groundwater treatment system will continue to operate until state regulatory levels are attained.

Previous Studies

1986
•CRREL's First 25 Years, Cold Regions Research and Engineering Laboratory (CRREL), Hanover, New Hampshire, Internal CRREL Publication, June

1990
•Aerial Topographic Survey Plan, Schofield Bros. Inc., Professional Surveyors, Framingham, Massachusetts.

1991
•Site Investigation Report, Internal CRREL Publication, April
•Environmental Photographic Interpretation Center (EPIC), September 1991, Site Analysis of the Cold Regions Research and Engineering Laboratory, US EPA, Las Vegas, Nevada.
•Geology and Hydrogeology at CRREL: A Preliminary Site Investigation, CRREL Internal Report 1088, Hanover, New Hampshire, Gatto, Lawrence W. and Sally A. Shoop, May
•The Fate and Treatment of Trichloroethylene (TCE) in Air, Water, and Soil: A Compilation of References and Abstracts, CRREL Internal Report 1081, Hanover, New Hampshire, Marion, Dr. Giles, January
• Final Report on the Findings of the Petrex Soil Gas Survey Performed at the US Army CRREL in Hanover, New Hampshire, Farmington, Connecticut, Northeast Research Institute, Inc. (NERI), December
• CRREL's Site Investigation and Analysis for Trichloroethylene, CRREL Internal Report, Hanover, New Hampshire, Perry, L.B., et. Al.
• Ground Water Investigation Norwich, Vermont, prepared for the Vermont Department of Environmental Conservation, Waterbury, Vermont, Wehran Engineering Corporation, July

1992
• Final Remedial Investigation Report for Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire, Arlington, Virginia

1994
• Phase II Remedial Investigation for Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire, final report, Cambridge, Massachusetts, A.D. Little, March

2000
• TCE source area treatment progress report, McKay, Daniel, January

2002
• A comparison of Permanganate Delivery Methods in an Unsaturated Setting, McKay, Daniel and Berini, C., March

2005
• High Delivery of Permanganate Solution to Oxidize TCE, McKay, Daniel and Berini, C., February

Undated

• Work Plan, Field Sampling Plan, Health and Safety Plan and Quality Assurance Project Plan for Remedial Investigation, Cold Regions Research and Engineering Laboratory in Hanover, New Hampshire, Ecology and Environment, Inc. (E & E)

• History of TCE Use and Handling at CRREL, CRREL Internal Report 1084, Hanover, New Hampshire., Faran, Karen J

• Work Plan, Quality Control Plan, and Health and Safety Plan for Phase II Remedial Investigation, Cold Regions Research and Engineering Laboratory in Hanover, New Hampshire, Cambridge, Massachusetts, Arthur D. Little, Inc. (A.D. Little)

COLD REGIONS RESEARCH AND ENGINEERING LABORTORY

Installation Restoration Program Site Descriptions

CECRL-002
Former TCE and Fuel Oil USTS

SITE DESCRIPTION

CECRL-002 is located along the northern side of the main laboratory building. This site is the location of former underground storage tanks (10,000-gallon tank containing TCE and a 12,000-gallon tank for fuel oil storage).

The TCE tank was removed in 1972 and replaced by another 12,000-gallon fuel oil tank. Both fuel oil tanks were removed in 1989. At the time the TCE tank was removed, no sampling was conducted; however, solvent odors were noted.

Site investigation during the RI (1992/1993) found extensive TCE contamination in the groundwater. In 2000, the concrete pads where the tanks had been located were removed, along with approximately 100 cy of contaminated excavation debris and relocated to an approved location on the CRREL property. This material, with state concurrence, was removed to an approved waste disposal site (Waste Management of New Hampshire 90 Rochester Neck Rd. Rochester, NH).

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
TCE

MEDIA OF CONCERN:
Soil, Groundwater

Phases	Start	End
PA	199005	199011
SI	199101	199105
RI/FS	199108	199306
RD	199509	199809
RA(C)	199806	200208
RA(O)	199909	201209

RIP: 200208
RC: 201209

With the concurrence of state regulators, subsurface potassium permanganate injection was conducted to address TCE in remaining soil at both CECRL-002 and 009, 2000 to 2003. TCE concentrations in soil have been reduced; however, concentrations have not been reduced throughout the site to state regulatory requirements.

The potassium permanganate treatment system including the satellite injection buildings at CECRL-002 and CECRL-009 and supporting utilities have been removed (2005) and disconnected from this site. The removal of the satellite injection buildings from these sites will aid in future treatment applications and are no longer deemed necessary or usable.

CLEANUP STRATEGY

Assume in-situ treatment of contaminated soil. The success of the potassium permanganate injection to date currently needs to be fully defined and evaluated. Following the evaluation a decision will be made on the appropriate remedial technology needed to fully meet the state regulatory requirements to achieve site closure.

Treatment of groundwater for the entire installation is continuing under CECRL-018. Groundwater monitoring will continue until the site is closed in accordance with regulatory requirements.

CECRL-009
Research Ice Well

SITE DESCRIPTION

CECRL-009 is located approximately 60 feet north of the western most side of the Main Laboratory building. This is the location of the former ice well, a steel-cased 200-foot deep cylinder in which TCE was used in refrigeration lines and drilling fluid mixtures. This area may also contain TCE-contaminated soils resulting from the 1970 explosion of the former TCE tank in site CECRL-001. Another site located in close proximity, CECRL-002, is also contributing to the TCE detected in monitor well CECRL-009. This is evident due to the fact that TCE detected within the ice well is only 25% of the concentration detected in the down-gradient monitor well.

Site investigation during the RI (1992/1993) found extensive TCE contamination in the groundwater. With the concurrence of state regulators, experimental (pilot scale) subsurface potassium permanganate injection was conducted to address TCE in soil, 1999 to 2002. TCE concentrations in soil have been reduced.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
TCE

MEDIA OF CONCERN:
Soil, Groundwater

Phases	Start	End
PA	199005	199011
SI	199101	199105
RI/FS	199108	199306
RD	199509	199809
RA(C)	199806	200208
RA(O)	199909	201209

RIP: 200208
RC: 201209

CLEANUP STRATEGY

Assume in-situ treatment of contaminated soil. The success of the potassium permanganate injection to date currently needs to be fully defined and evaluated. Following the evaluation a decision will be made on the appropriate remedial technology needed to fully meet the state regulatory requirements to achieve site closure.

Treatment of groundwater for the entire installation is continuing under CECRL-018. Groundwater monitoring will continue until the site is closed in accordance with regulatory requirements.

CECRL-018
Cooling Water Discharge to Conn. River

SITE DESCRIPTION

CECRL-018 is located west of CECRL-012 adjacent to the Connecticut River. This is the discharge site for non-contact cooling water. The discharge is used for non-contact cooling water is used by the facility to support CRREL's mission.

The interim groundwater treatment system has been replaced by a permanent system. The permanent system became operational in January 1994. It treats groundwater pumped from the existing production well network that is used to supply water for the CRREL refrigeration systems. This remedial action serves two functions. It allows CRREL to gain compliance with their National Pollution Discharge Elimination System (NPDES) permit and it serves to remediate the groundwater beneath CRREL. Operation of the production wells exerts a significant level of hydraulic control on the spread of chlorinated hydrocarbon contamination within the site.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN:
VOCs

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	199005	199011
SI	199101	199105
RI/FS	199108	199110
RD	199109	199206
IRA	199302	199401
RA(C)	199303	199402
RA(O)	199402	202409

RIP: 199402
RC: 202409

Groundwater flows in the direction of the production wells from CECRL-002 and CECRL-009, which are sources of groundwater contamination.

CLEANUP STRATEGY

Operation of the production well treatment facility will continue until influent groundwater well concentrations meet regulatory requirements. Overhaul plant as necessary (~FY10) to ensure efficient operation of the plant, followed by plant decommissioning.

IRP No Further Action Sites Summary

AEDB-R #	Site Title	Documentation/Reason for RC	RC Date
CECRL-001	SPILL SITE FROM FORMER AG STORAGE TANKS	Study Completed, No Cleanup Required	199404
CECRL-003	FORMER FUEL OIL UST	Study Completed, No Cleanup Required	199210
CECRL-004	CURRENT FUEL OIL UST	Study Completed, No Cleanup Required	199210
CECRL-005	ABOVE GROUND FUEL STORAGE TANKS	Study Completed, No Cleanup Required	199210
CECRL-006	FORMER GASOLINE USTS	Study Completed, No Cleanup Required	199210
CECRL-007	CURRENT FUEL OIL UST	Study Completed, No Cleanup Required	199210
CECRL-008	ABOVE GROUND WASTE OIL TANK	Study Completed, No Cleanup Required	199210
CECRL-010	FORMER OPEN STORAGE AREA	Study Completed, No Cleanup Required	199210
CECRL-011	CONCRETE STORAGE PAD	Study Completed, No Cleanup Required	199210
CECRL-012	EXTERIOR TEST POND	Study Completed, No Cleanup Required	199210
CECRL-013	OPEN STORAGE AREA	Study Completed, No Cleanup Required	200009
CECRL-014	MAIN LABORATORY MACHINE ROOM	Study Completed, No Cleanup Required	199210
CECRL-015	FORMER GREENHOUSE FUEL OIL UST	Contaminated soil was removed and treated in FY97. Study complete no further investigation required.	200309
CECRL-016	FORMER TCE OPEN STORAGE AREA	Study Completed, No Cleanup Required	199210
CECRL-017	POND NEAR WELL 3	Study Completed, No Cleanup Required	199210

IRP Schedule

Initiation of IRP: 1990

Past Phase Completion Milestones

1990
•PA Initiation, Installation ..... September

1991
•PA/SI, Installation ..... June
•Interim Groundwater: Treatment System Design (CECRL-018) ..... April
•Groundwater: Treatment System Design (CECRL-018) ..... June

1992
•Phase I RI (CERCL-001 – CECRL-018) ..... October
•Phase II RI Award (CECRL-001, 002, 009, 013, and 015) ..... December

1993
•Interim Groundwater: Treatment System On-line (CECRL-018)..... February

1994
•Permanent Groundwater: Treatment System On-Line ..... January
•Phase II RI (CECRL-001, 002, 009, 013, and 015)..... April

1997
•Removal Action - Ice Well Contents..... March
•Interim RA – Soils and Localized GW..... September

1998
•RA (C) at two sites..... September

2002
•Removal of UST concrete support pad at CECRL-002 ..... September

2003
•Potassium Permanganate injection at CECRL-002 and 009 ..... October

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: 2008

Schedule for Next Five-Year Review: 2009

Estimated Completion Date of IRP (including LTM phase): 2024

Cold Regions Research and Engineering Lab IRP Schedule

(Based on current funding constraints)

AEDB-R#	DESCRIPTION	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
CECRL-002	Former TCE and Fuel Oil USTs	RA(O)									
CECRL-009	Research Ice Well	RA(O)									
CECRL-018	Cooling Water Discharge to Conn. River	RA(O)									202409

Prior Years Funds

Total Funding up to FY04: **$11,418K**

FY05

Site Information	Expenditures	FY Total
RA(O) AEDB-R CCREL-002	$ 13.97K	
RA(O) AEDB-R CCREL-009	$ 9.99K	
RA(O) AEDB-R CCREL-018	$ 300.00K	**$324K**

Total Prior Year Funds: **$11,741,960**

Current Year (FY06) Requirements

Site Information	Requirements	FY Total
CCREL-002	$ 125K	
CCREL-009	$ 125K	
CCREL-018	$ 230K	**$480K**

Total Future Requirements: **$7,070K**

Total IR Program Cost *(from inception to completion of the IRP):* **$30,230K**

Community Involvement

No Restoration Advisory Board has been established by the Cold Regions Research and Engineering Laboratory. TRC has been inactive since the last survey of public interest in 1995.

A public involvement survey was conducted in 1995 and the community of Hanover, NH has shown no interest in forming a RAB. An additional survey is anticipated to be conducted in the near future.